Pocket Notebook, PN-Undated.18

This undated pocket notebook was used by Edison, probably during the mid-1880s. It contains notes regarding chemical compounds and their reactions to heat. There are also two drawings and one page of miscellaneous calculations. The pages are unnumbered. Approximately 20 pages have been used.

Peroxide Potassium
fuses at higher
point than Caustic
K. at which
heat decomp.
into K monox
+ O.

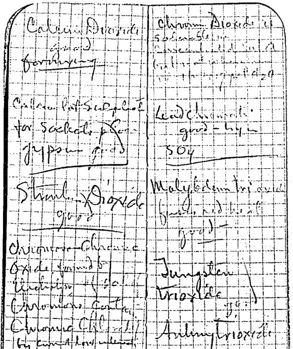
Pot monosulphide

Pot Hydrosulphide

Sodium Hydrosulphide
good

Sodium Monoxide.
very melts
red heat

Sodium Dioxide
good



Calcium Dioxide
good
for drying

Calcium [illegible] Sulphate
for Sockets [illegible]
gypsum good

Strontium Dioxide
good

Chromium Chromic
Oxide formed by
electrolysis of [illegible]
Chromium conta-
Chromic Chloride
by current low intensity
black powder insoluble
in conc. acid Cr_4O_5

Chromium Dioxide is
soluble in
[illegible]
[illegible]
[illegible]

Lead Chromate
good - hy in
SO4

Molybdenum tri oxide
fused red heat
good

Tungsten
trioxide
good

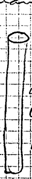
Antimony trioxide
" pentoxide

Bismuth
Trioxide from
red [illegible]

[illegible]

Pentoxide [illegible]

Sul Zinc when
heated decomp
to sulphurous
acid + O,
this takes place
same temp as
heating Perox
many



Silver or Copper
~~Copper~~ Covered
with platina
by welding
then rolled
in plate

Nickel ditto

Hydrometer
with tube to
show height
SO_4 in bottles

---

platinum or Mica
diaphragm &
glass case
Strain gauge
perhaps
Compressionary
do it in
Hydrometer Case

on heating to
red heat only the
neutral Sulphates
of the alkalies
of the alkaline
Earths & Lead
remain unchanged
at the temp of
Melting Iron
2 latter Classes
are decomp but
Alkaline Sulphates
Volatilize undecomposed
Even Zinc &
Manganous
Sulphates are so
difficult to decomp
that in practical work
they are considered
fireproof

On roasting
decomposable sulphides
yield metallic oxides
Sulphur Dioxide +
O. They are much
more easily split
on heating by adding
Such as Carbon iron
Etc.

Phos acid
Silicic & Boric
acid Expell Sul
a at red heat
Phosphe A
boils above
a red heat.

Cast iron is very little
acted on by Conc SO_4
Either hot or cold
for many years cast iron
vessels have been
used for boiling Sul a
with [illegible]
in Cold & at gentle heat
Even moderately dilute
acid acts very little
on Cast iron
it can be used for
pumping etc

~~Hutch 143~~
~~Batch 148~~
~~EH 135~~
~~Tomlinson 140~~
~~Russell 141~~
~~Chinnock 150~~
~~Edison 137.~~

Roder (Dingl
jnl CXI 397)
proposed Enamelled
Cast iron boilers
indicated an Enamel
1 pt powdered burnt
alum 4 pts Red lead
2 pts pure Silica
melted together
fluxed mass cooled in
H_2O dried powdered
15 pts of it mixed with
(intimately) 20 parts
pure Silica & 3
pts oxide tin
whole ground up in
spirits turpentine
laid with soft hair
brush on smoothly
turned inner surface
of boiler repeated 5
times Each time allowed
dry Enamel fixed by
strong annealing
Lunge says ~~and~~
Even best Enamel only

vessel for short tu
Contraction metal &
Enamel Etc

Make Cylinder
Sand & Mang
Sulphate also
oxide — also
Zinc Sulphate &
Sand heat see if
Vessels can be
made —

Try same Expmt
with strongest
SO_4 + the pint
different Metals
also Cast iron
boil — also
put phos anhydride
to Concentrate &
see

also try reg
Expt plat & Carb
& SO_4 boil but
use phos anhydride
to Concentrate it
by taking up H_2O
see if it makes it
stronger it will
Certainly raise
boiling point &
then get higher
EMF —

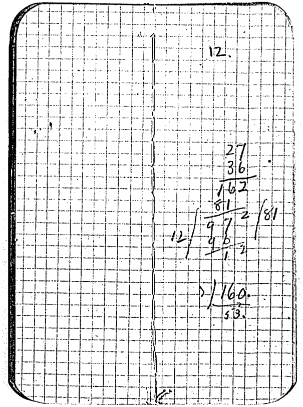
see if mixture
of Sulphur &
Peroxid Mang
boiled dont
turn into Sul
acid —

Try in Regwa
Sul Soda -
Coal Reduces it
when heated to
Sulphide -

Lime
Remark p 644
Iron tube (wrought)
Covered inside +
outside fire clay
+ waterglass this
burnt in -
brot strong red heat
& Sulda strong
passed in -

See if Eimer (Amend)
have
Pyrosulphuric acid
or solid alum
of Nordhausen
also get some of
the strongest SO_4
also some
Nordhausen fum
acid

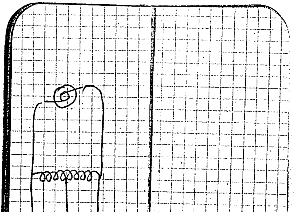
Point Suggests
peroxide lead
deposited at p
pole as a bluish
black shining
body by electrolysis
of an alkaline
solution of lead
Sodium Tartrate.



12.

27
36
162
81
972
12/972/81
96
12

3/160.
53.



2/3